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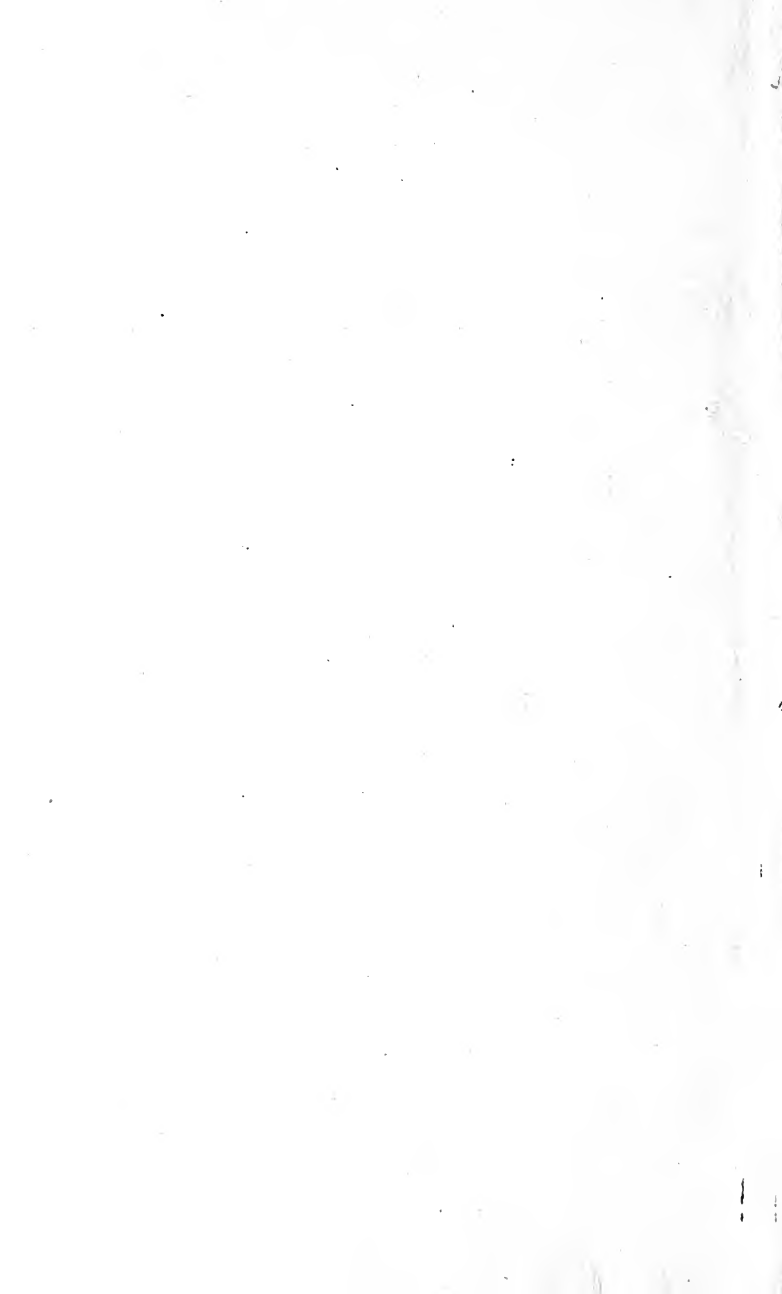


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# LOCATING THE FACTORY



TRAFFIC DEPARTMENT

LEHIGH AND NEW ENGLAND RAILROAD CO.

BETHLEHEM, PA.

NO. 1000  
LEHIGH AND NEW ENGLAND  
RAILROAD COMPANY

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“The first charge of industrial managers is proper plant location. This factor satisfactorily taken care of, is a step forward to success.”

—VICTOR V. KELSEY, in *Chemical and Metallurgical Engineering*, August 31, 1921.

“In the days when naive chambers of commerce beat brass bands about the country to get any industry whatever to locate in a city, many serious mistakes of production location economics were made.”

—J. GEORGE FREDERICK, in *Industrial Management*, September 1, 1921.

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## LOCATING THE FACTORY



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## LOCATING THE FACTORY

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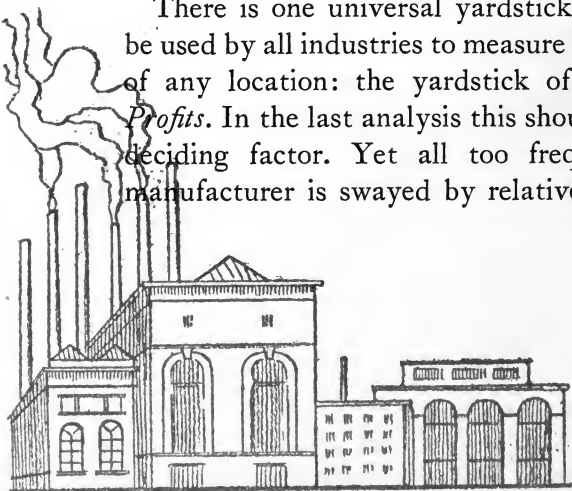
**M**ANY enterprises are handicapped by being poorly located, and many other enterprises are profiting by being well located. A poor location often places a manufacturer at a serious disadvantage as regards competition, while a good location gives him a distinct advantage over his competitors. But many manufacturers do not realize or consider the great influence exerted by location on the success of an enterprise.

The increasing costs of transportation, power, labor, and other factors, however, have focused the attention of an increasing number of business men on the importance of this problem. The proprietors of many well-established plants will promote their success

by re-locating their enterprise, and all those who are planning new enterprises should give this subject detailed study.

The United States Steel Corporation found it profitable to build a whole new city, but the American Rolling Mill Company finds it profitable to remain where it is; Henry Ford advocates that factories move to rural towns, while William Miller Booth states that "The modern American city is the nucleus of successful manufacturing." These seem like conflicting opinions, but if we will examine the *basic factors* that should govern the locating of a factory, manufactory, or other enterprise, we will see that selection and decision can be made scientifically, accurately and safely.

There is one universal yardstick that can be used by all industries to measure the worth of any location: the yardstick of *Ultimate Profits*. In the last analysis this should be the deciding factor. Yet all too frequently a manufacturer is swayed by relatively unim-

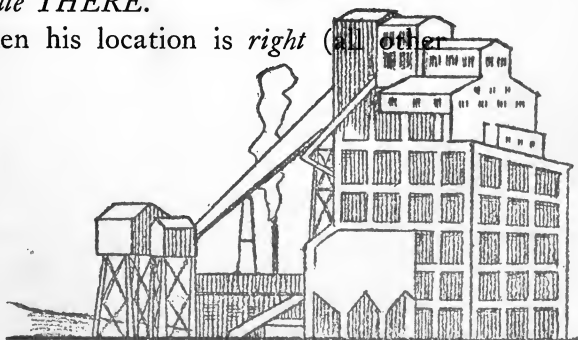


portant considerations, considerations of the moment; such as, bonuses, free sites and tax exemptions, whose effect wear off and leave him stranded high and dry in a locality wholly uneconomical from a *manufacturing* and *distributing* point of view. /

Take the experience of certain manufacturers in Minneapolis, for example. In 1897 Minneapolis "bought" 20 industries through free sites, bonuses and stock subscriptions. Twenty years later, only one of the original 20 survived. Minneapolis is an excellent location for many industries, but evidently it is also a poor location for others.

There are approximately 285 cities in the United States, each with a population of more than 25,000. Every one of these towns is probably a good location for *one* or *more* industries and the *very best location for at least one*. The sagacious manufacturer will uncover that *one* location which is *best for him*—and locate *THERE*.

For when his location is *right* (all other



conditions being equal) a manufacturer is in position to compete for the total available trade on equal terms, *at least*, with his competitors. But if his location is *wrong* (other conditions being equal) he is handicapped to the precise extent that the location handicaps him. A wrong decision in this respect, therefore, becomes a serious matter, affecting profits and dividends; while a right decision is of lasting, cumulative, importance and value.





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## LOCATING THE FACTORY

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### FACTORS THAT DETERMINE DIVIDENDS

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“The subject of locating industries through-out this broad country, probably on account of its ample area, has received less constructive attention than most other industrial problems.” . . . “It may be stated that the most profitable location for a factory is where the cost of production plus the cost of distribution is at a minimum. It is evident, then, that the profits of any particular industry are directly related to the choice of the site.”

—H. H. McCANNA, in *Industrial Management*, June 1, 1921.

**T**HE activities of almost all business enterprises may be classified into four divisions: Financing, Accounting, Manufacture, Distribution.

Of these four, Financing and Accounting are influenced but little by the location of a

factory. To be sure, banking facilities and accounting facilities must be provided by the locality and by the design of the plant, but when we measure the value of a location by our gauge, *Ultimate Profits*, the significance of banking and accounting facilities as an influence that should *determine* where a factory should be situated, is almost negligible. In considering Financing from the viewpoint of raising Capital for the enterprise, J. Russell Smith, Ph. D., in his book, *The Elements of Industrial Management*, says,

“Capital is scarcely worthy of discussion as a locating factor, because of its mobility. When the other factors combine to make a prospect of profit, *there*, granted political stability, *capital will go*, whether it is to build a huge mill and town in the woods of Maine for the manufacture of paper, to dig oil wells in the mosquito-ridden swamps on the Gulf of Mexico, or to aid in the search for precious metal in the frozen reaches of the upper Yukon.”

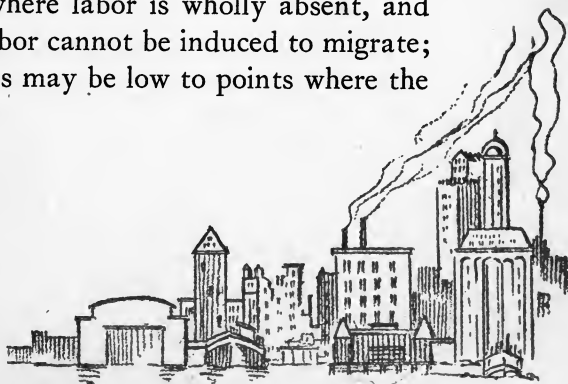
The two phases of industrial activity that are affected most incisively by the location of the



factory, are *Manufacture* and *Distribution*. Economies of production and distribution are usually dependent in large measure on the site selected. Thus the importance of having the factory correctly situated is emphasized, for *production and marketing are the two major divisions of business activity that bear most directly on a manufacturer's profits.*

But the forces that make for low *manufacturing* costs and the forces that make for low *marketing* costs are often not in harmony. For instance, power may be "dirt cheap," or raw materials plentiful, at a point so far from the markets for the article manufactured that its price *at the markets* would be prohibitive.

And it is equally true that all the forces that promote low manufacturing costs may not work together; neither do the factors affecting distribution always pull in the same harness. Raw materials may be abundant at points where labor is wholly absent, and to which labor cannot be induced to migrate; freight rates may be low to points where the



market is overcrowded, but high to markets practically free from intensive competition.

So it is evident that the selection of the *best* location for a factory cannot be based wholly on factors that affect either Marketing facilities or Manufacturing facilities alone. The *effect* of the *different* factors, or opposing forces, must be *weighed*, and *that location selected which combines the greatest number of favorable factors in the greatest extent.*

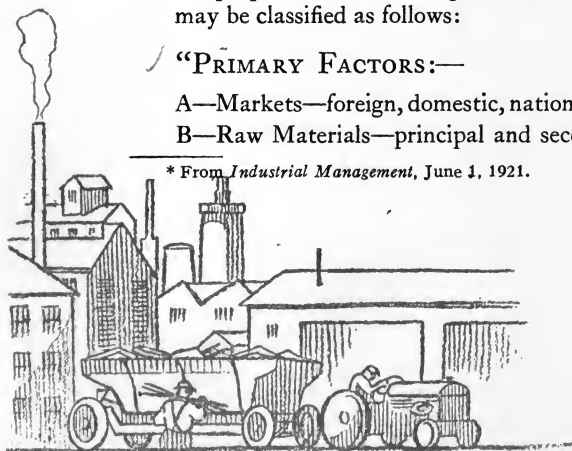
In his article "Choosing the New Plant Location"\* H. H. McCanna of the E. I. duPont de Nemours Company says,

"There are certain fundamental factors which enter into the solution of every plant site. It is the weighing of these factors, and establishing the relative importance of each that assists most in drawing scientific conclusions and deciding upon the proper location of the plant. The main factors may be classified as follows:

✓ "PRIMARY FACTORS:—

- A—Markets—foreign, domestic, national and local.
- B—Raw Materials—principal and secondary.

\* From *Industrial Management*, June 1, 1921.





C—Transportation—rail, water and motor truck.

D—Labor—male, female; skilled, unskilled.

E—Power—coal, fuel oil, electric.

“SECONDARY FACTORS:—

A—Climatic requirements, if any.

B—Public utilities required.

C—Dependency on municipal environment.

D—Dependency on municipal laws or ordinances.

E—Advertising value of plant.

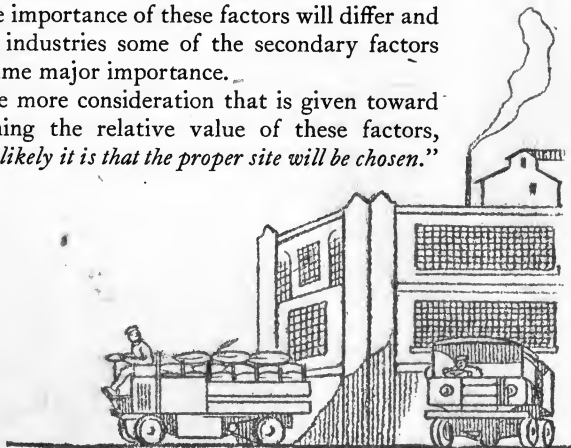
F—Financial aids—capital, bonus, free site.

G—Disposal of plant wastes.

“In outlining the above factors it will be seen that the primary ones are those which usually enter most prominently into the *production and distribution costs* of the product, which as stated previously, are kept at a minimum by a properly selected site.

“These are the items then that should receive careful and thorough study and should be *weighed in relation to each other for any particular industry*. It is understood, of course, that in various industries, the importance of these factors will differ and in some industries some of the secondary factors will assume major importance.

“But the more consideration that is given toward establishing the relative value of these factors, *the more likely it is that the proper site will be chosen.*”





## LOCATING THE FACTORY



### THE PRIMARY FACTORS

“All other things being equal, an industry naturally locates near the market which it expects to serve; for, commonly, the founding of an industry comes either because of a demand from a market or from an effort to create such a demand.”

—DEXTER S. KIMBALL, M. E.

A—MARKETS.—Generally speaking, the market that a manufacturer wants to reach, is the *pivotal* consideration that should govern his choice of plant location. For unless he can sell his goods, he can realize no profits. Normally, it would be unwise for the manufacturer whose goods are used by the sheep-herder on the slopes of the Rockies to locate in the heart of the New England States; and it would be equally difficult to reach the Southern cotton fields or the shoe centers of

Lynn or Brockton, Massachusetts, from a factory on the Pacific coast, if competitors' plants were located closer to these markets.

If the product is one that appeals to the whole rank and file of the population of the United States and the manufacturer does not, or cannot, cover the entire country, it may be advisable for him to locate in or near the heart of one of our most thickly settled districts. But if the product appeals to a well defined *class* of people, he should consider where the largest number of this class are to be found.

/ From a geographical standpoint, many of our larger markets are clearly defined, even though political boundaries are not recognized in the world of production. For example, "The Industrial United States includes the section north of the Ohio River and the Mason and Dixon Line, and east of the Mississippi River, with smaller sections like the Birmingham district in Alabama, the Pueblo district in Colorado, and Kansas City in Kan-

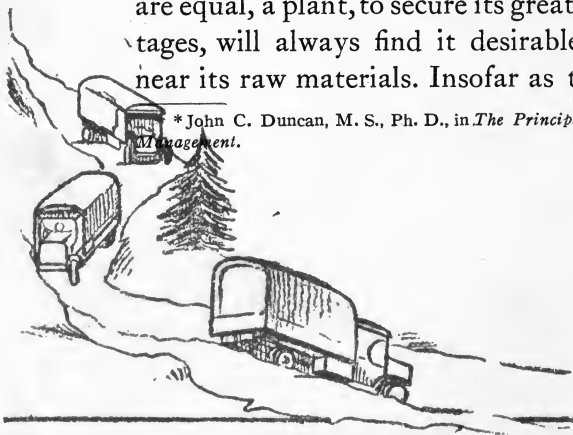
sas and Missouri.”\* A manufacturer whose product is used by *other manufacturers*: such as, lathes, machine tools, or heavy machinery, should probably erect his plant at a point convenient to one or more of these great manufacturing centers.

Conditions which exist in the business world today lay stress on the side of distribution; the producer must go to his market where formerly the market came to him. Usually, then, a factory should be located at a point from which its product can be shipped with equal promptness and cheapness to *each of its principal sales centers*.

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B—RAW MATERIALS.—Second in importance to the market is the location of raw materials. If a market is accessible and all other things are equal, a plant, to secure its greatest advantages, will always find it desirable to locate near its raw materials. Insofar as the cost of

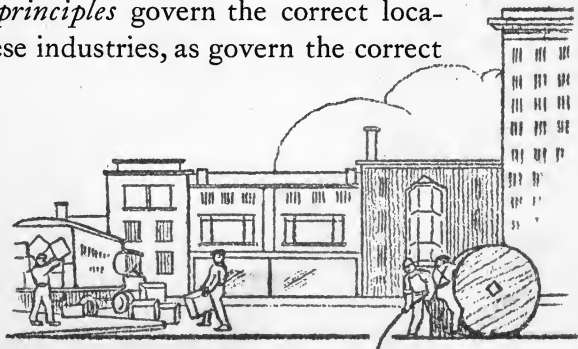
\* John C. Duncan, M. S., Ph. D., in *The Principles of Industrial Management*.



raw materials is concerned, that location will be the best that will make the total resultant freight charges of *all* raw materials the *minimum*.

This is why paper mills are found near the forests, and packing houses near the stock-raising regions. The best location for a blast furnace (given a market) is a site where ore, coke and limestone may most conveniently be brought together. In the manufacture of paving brick, it has been estimated that the relative weights of clay, finished product, and coal are approximately 40, 30, and 3. In a case of this sort, it is evident that proximity to market and to clay beds is of utmost importance.

The raw materials used by some manufacturing plants are composed largely, or entirely, of the finished products of other plants. This is true, for instance, in the production of fine electrical specialties. But the same *principles* govern the correct location of these industries, as govern the correct



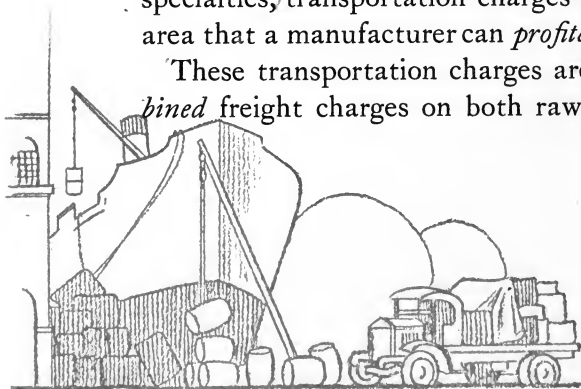
location of other industries; the manufacturer should locate his factory as conveniently as practical, to the source of *his* raw materials.

The location of the actual materials used by a manufacturer as his raw materials is *always* an important consideration, but the fact must not be lost sight of that the location selected will, in many cases, be a *compromise between the availability of raw materials and the accessibility of markets*. A correct compromise, in these respects, usually results when the factor of Transportation is considered.

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C—TRANSPORTATION.—Transportation usually *limits the size* of a manufacturer's market more than any other one factor. For except in the case of patented articles, such as novelties which cannot be duplicated, and branded articles so widely advertised as to be really specialties, transportation charges wall-in the area that a manufacturer can *profitably* reach.

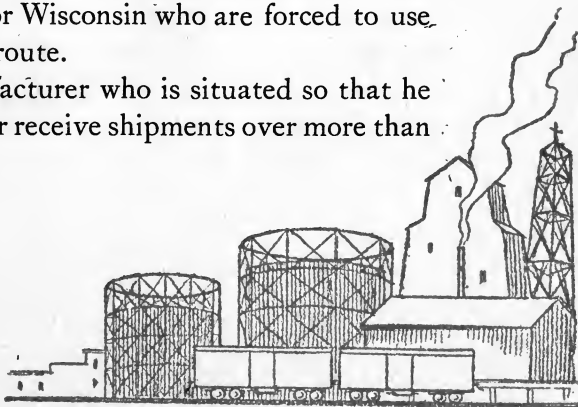
These transportation charges are the *combined* freight charges on both raw materials



and finished product. But the crux of the problem of transportation usually lies in the *relative* costs of transportation for raw materials and for finished product; i. e., the *ratio* between the freight rates on the materials that go into the product and the freight rates on the product to the points where it is marketed. The ideal location, in this respect, is where these *combined* charges will be lowest.

As between waterways and railways, the former have the advantage of cheapness, whereas the latter have the advantage of greater speed. Frequently the part-rail and part-water route is the most economical. In reaching the Pacific coast, for example, a manufacturer situated in the East may ship by rail to an Atlantic seaport, thence through the Panama Canal to the Pacific port, and frequently undersell his competitors located in Illinois or Wisconsin who are forced to use an all-rail route.

A manufacturer who is situated so that he can make or receive shipments over more than

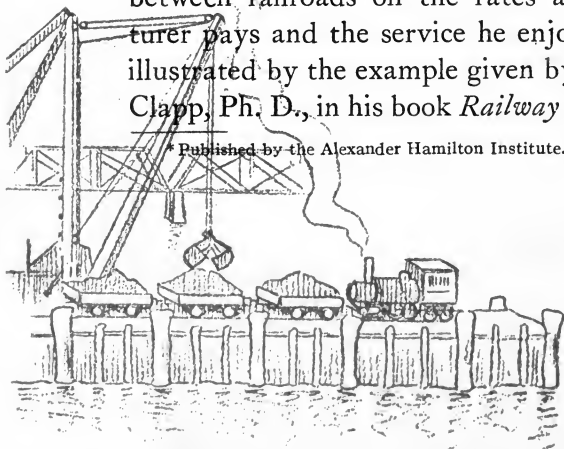


one railroad, is more likely to receive better service and enjoy lower freight rates, than the manufacturer so situated that he is at the mercy of one railroad. Thus, a manufacturer located along a belt-line railroad which taps the trunk-line railroads entering a large city, is in position to use any one of these trunk-lines for any of his shipments; moreover transfer charges will be absorbed in the rates quoted him by all the trunk-line railroads.

The growth of many of the "Industrial Districts adjacent to belt-line or connecting-line railroads in cities like Chicago, Kansas City, Minneapolis and St. Paul, is due largely to the superior transportation facilities afforded a manufacturer located along side of such a belt-line railroad.

The advantageous effect of competition between railroads on the rates a manufacturer pays and the service he enjoys, is well illustrated by the example given by Edwin J. Clapp, Ph. D., in his book *Railway Traffic*.\*

\* Published by the Alexander Hamilton Institute.

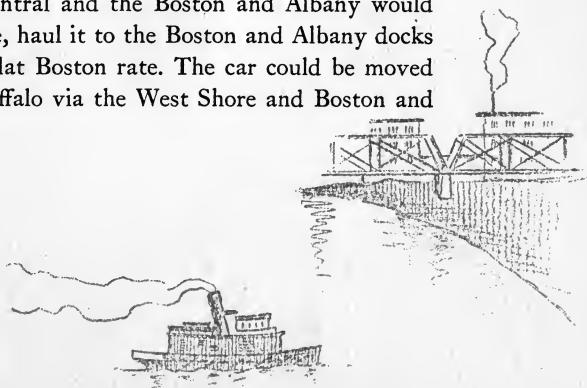




... "Boston is served by both the Boston and Albany and the Boston and Maine Railroads. The connection between the two roads is formed by the Grand Junction Branch of the Boston and Albany, which meets the Boston and Maine at Somerville. The Grand Junction branch terminates at East Boston, where, at the railroad docks, lie many of Boston's oversea lines.

"Suppose a carload of export freight is shipped from Nashua, a point reached only by the Boston and Maine. To put this freight on shipboard will cost the Boston rate plus a switching charge on the Grand Junction branch of the Boston and Albany, 2 1-2 cents per hundred pounds, minimum \$5 per car. The \$5 per car is what the Boston and Albany charges for switching the car to its docks; the Boston rate is the Boston and Maine's rightful compensation for hauling the car from Nashua. Only the Boston and Maine reaches Nashua, and this railroad need make no sacrifice in the matter of absorption of switching charges, in order to get the car to haul.

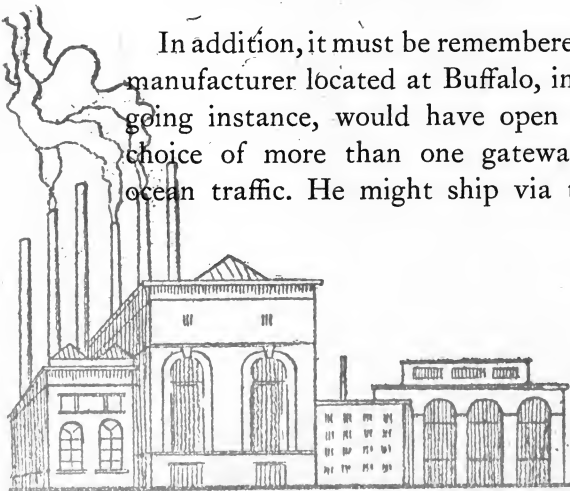
"If the export car originated at Buffalo, the New York Central and the Boston and Albany would of course, haul it to the Boston and Albany docks for the flat Boston rate. The car could be moved from Buffalo via the West Shore and Boston and



Maine. But these roads could manifestly charge no more than the Boston rate from Buffalo to the Boston and Albany docks, for the Boston and Albany and the New York Central stand ready to haul the car there at this flat rate. Therefore, the Boston and Maine must absorb into the Buffalo-Boston rate the switching charge which the Boston and Albany sees fit to make for hauling the car to the docks from the junction at East Somerville. Now the Boston and Albany does not care to encourage the route via the Boston and Maine of traffic which it can itself carry, so on the competitive traffic its charges for switching are 4 1-2 cents per hundred pounds, minimum \$9 per car. The Boston and Maine stands willing to absorb this charge on export traffic.

“That is, switching charges are absorbed, not added to the rate, in the case of competitive traffic; and they are not absorbed in the case of local or non-competitive traffic.”

In addition, it must be remembered that the manufacturer located at Buffalo, in the foregoing instance, would have open to him a choice of more than one gateway for his ocean traffic. He might ship via the Great

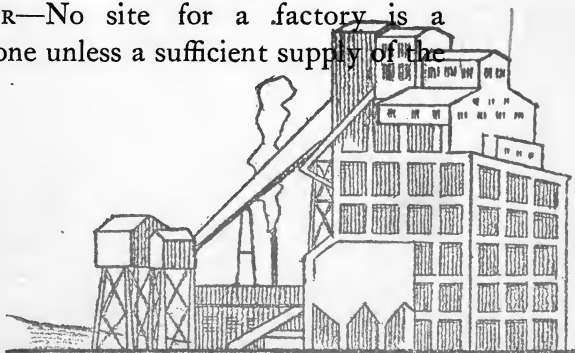


Lakes and the St. Lawrence River, via Boston, New York, Philadelphia or Baltimore. Thus he is benefited by competition on the seas as well as on land.

It is obvious that the factor of transportation costs has a big bearing on the *Ultimate Profits* a manufacturer will enjoy, and that there are many phases of this complicated problem which must be considered. Although the preceding illustration deals with ocean-bound shipments, the same *principle* applies to domestic shipments, and affects the small shipper just as much as the large shipper. No manufacturer should decide upon a location for his factory until he has very carefully *weighed ALL* the elements of transportation that will affect him. And since the subject of rates is an intricate one, most manufacturers will profit by the counsel that only an expert in these matters can give.

**D—LABOR**—No site for a factory is a desirable one unless a sufficient supply of the

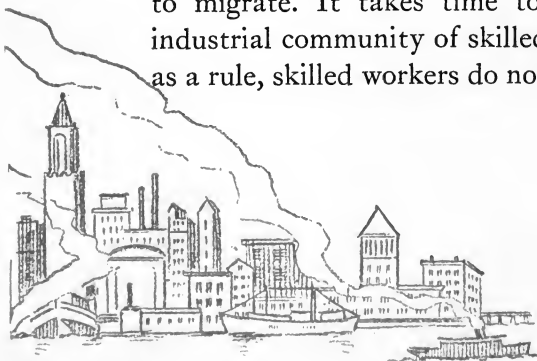
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kind of labor needed by the industry is available in the neighborhood or can be attracted to the locality; otherwise there is but little assurance of success. Perhaps the labor factor has caused more factories to re-locate than any other one consideration.

But in those industries where the bulk of the labor is unskilled, or semi-skilled, as in smelting plants and cement plants, the factors of Market, Raw Materials and Transportation will predominate, for the working population can be moved to the plant location from elsewhere. There are industries in which the worker will seek the enterprise, but there are also many industries where the enterprise must seek the worker.

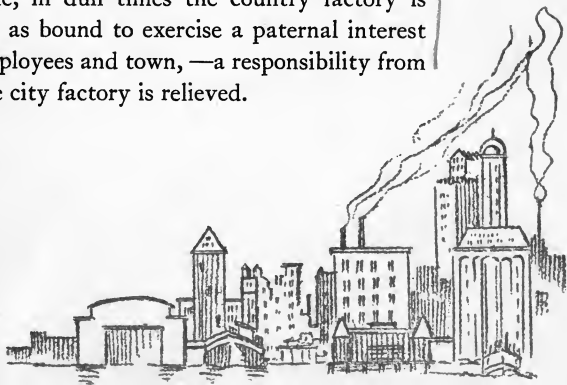
When the latter condition obtains, Labor becomes an important factor in deciding where a plant should be erected. It is usually exceedingly difficult to induce skilled labor to migrate. It takes time to build up an industrial community of skilled workers and, as a rule, skilled workers do not wish to leave



their environment without a considerable increase in wages, or other compensations. On the other hand, labor conditions are so unsatisfactory and troublesome in many large labor centers that manufacturers have moved from these points for this cause alone.

A consideration of the labor factor includes a study of the relative merits of city, country and suburban locations, for a given industry. The comparative advantages of these three is admirably summed-up by Hugo Dimmer in *Factory Organization and Administration*, as follows:

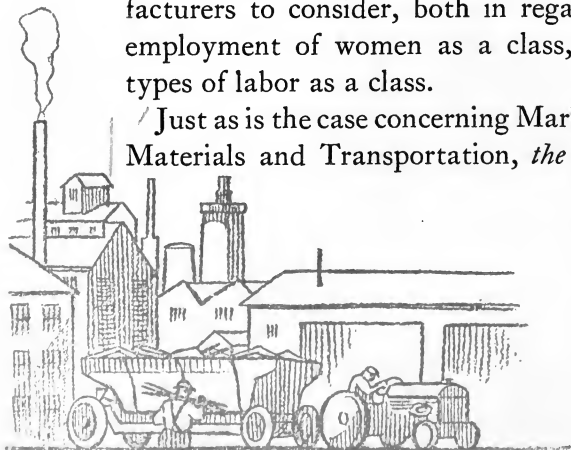
“As between city and country sites, the city presents the most flexible labor market. Skilled labor is most easily obtained on short notice in a city. In the country labor is cheaper, and the workmen are likely to be more contented. They are likely to marry and have homes in pleasant surroundings, and the inducements for the wasting of their earnings are not so great as in a city. At the same time, in dull times the country factory is looked to as bound to exercise a paternal interest in the employees and town, —a responsibility from which the city factory is relieved.



“A suburban site, convenient to a belt line railway such as exists in most of the larger trade centers, presents many advantages of both city and country. It permits the purchase of sufficient ground for a factory site to allow for future expansion. It has the labor market of the city to draw from, and offers the workmen who choose to live close at hand the opportunity of pleasant home sites.”

One of the factors that induced the recent location in Huntington, West Virginia, of a large new Thermos bottle plant was the *unbalanced* labor situation there, between male and female labor. There has been an abundance of labor for men at this point—in the railway car shops, etc.—but the women of the town who wanted to work have had but little opportunity. This phase of the labor factor is an important one for many manufacturers to consider, both in regard to the employment of women as a class, or other types of labor as a class.

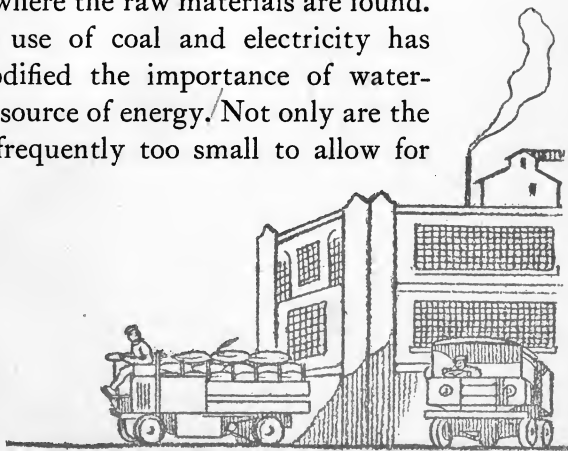
Just as is the case concerning Markets, Raw Materials and Transportation, *the nature of*



*the industry determines the degree of influence* Labor should exert on site selection. But it is at all times essential that sufficient dependable labor be at hand to completely satisfy the requirements of the enterprise.

**E—POWER.**—Before the days of steam and electricity practically all industries requiring power necessarily sought water-power when choosing a manufacturing site. And even today, water-power is usually the cheapest source of energy that a plant of any kind can have. In some industries where raw materials and water-power are found in close proximity, and the transportation costs on the raw materials are greater than these costs for the finished product, factories using these raw materials should be built beside a waterfall in the region where the raw materials are found.

But the use of coal and electricity has greatly modified the importance of water-power as a source of energy. Not only are the waterfalls frequently too small to allow for



growth, but their location is far from the markets for the product. New England got its start in manufacturing because of its abundant water-power, but at the present time large parts of the manufacturing districts of New England have outgrown their puny waterfalls and are dependent on coal imported from Pennsylvania and West Virginia.

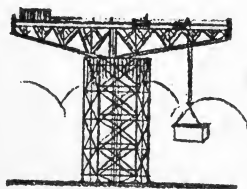
For most industries, the fuel bill is a relatively small item in the costs of manufacture, which superiority of efficiency in labor or manufacturing methods easily offsets. Of course, inexpensive power, whether coal, electricity, fuel oil or water-power, is always a factor to be carefully considered in selecting a factory site. But this factor, like each of the preceding factors, must always be considered in relation to the other factors which may modify its importance.

Seldom, indeed, does it happen that the existence of any one consideration should determine an industrial location. The manufactories that *permanently flourish* are usually



those that are located in a district where they can count *the greatest number* of desirable primary factors.

The Waltham watch, however, is made at Waltham, Massachusetts, primarily because this location is away from dust and soot. This is an instance where a Secondary Factor is of primary importance. Not infrequently, for a given industry, other factors enter in, which modify or limit a manufacturer's choice of sites.





## LOCATING THE FACTORY



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### THE SECONDARY FACTORS

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“I knew a wise man who had it for a by-word when he saw men hasten to a conclusion: ‘Stay a little, that we may make an end the sooner.’”—BACON.

**I**N some few industries, the effect of climate is highly important, but in most industries, although the cost of heating a factory in a cold climate may be of some importance, the climate as a locating influence is practically negligible. In the textile industries, for example, climate formerly had considerable influence, but now such factories are kept at the proper degrees of temperature and humidity by artificial means. Of course, a healthful, invigorating climate is conducive to increased production, and for

this reason a site where such a climate is found may be desirable.

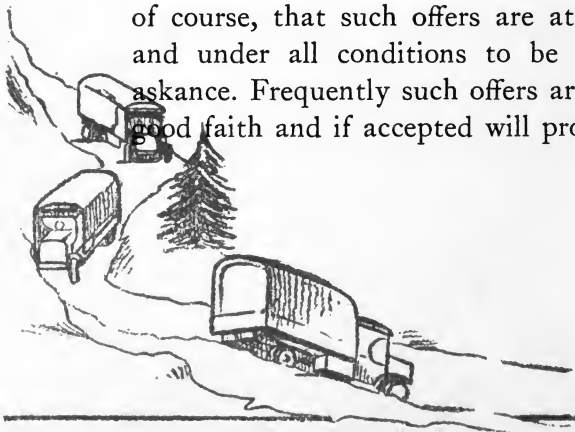
✓ The public utilities supplied by a district, the municipal environment and the laws of the state and ordinances of the town or city, should always be looked into carefully when choosing a factory location. It is important that the means of transportation for workers to and from the plant be considered, for this and other environments of the factory will have bearing on the contentment of labor.

One of the chief objections to factory sites in rural districts is the difficulty encountered in according skilled workers, accustomed to the conveniences of city life, similar conveniences in the country. ✓ In any location, the spirit of the inhabitants, the local laws, and the attitude of the people toward the enterprise should be investigated. "The temper of a city is told by the spirit of its people. No prospective manufacturer wants to try to do business in a town which is itself antagonistic or indifferent." Of course, the laws relating to

buildings, construction, sewage, smoke, noise, etc., and the water supply, fire protection, sewage facilities and similar items should not be overlooked.

Usually the advertising value of a plant should not be considered at all in choosing a location. This is a field wholly removed from the usual functions that devolve upon the factory itself and except in very unusual cases, a consideration of the advertising value of a site, may lead to false conclusions. The advertising value of almost any site is passive; it is not a *BIG* constructive force. Advertising funds should be used for strictly advertising purposes; they should not be used to purchase property.

The dangers arising from being unduly influenced by offers of financial aids has already been pointed out. This does not imply, of course, that such offers are at all times and under all conditions to be looked at askance. Frequently such offers are made in good faith and if accepted will prove profit-

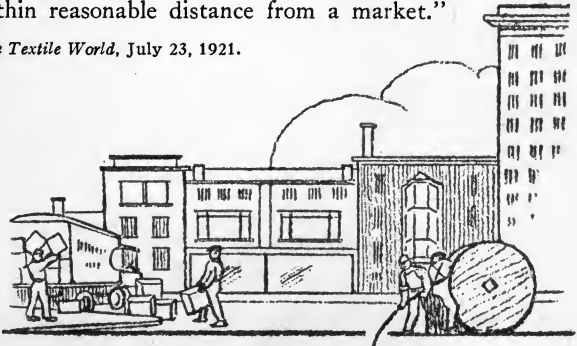


able to the manufacturer and to the locality offering these inducements. But they must *not* be considered as *FIRST* considerations; other more important considerations take precedence over them. This is shown by Charles W. MacMullen, president, Clark, MacMullen & Riley, Inc., Consulting Engineers, when he says,\*

“An encouraging feature of present day industrial development is the increased care exercised by the manufacturer when selecting a location for his new mill or factory. Too often in pre-war times he was unduly influenced by an invitation from some small industrial center to locate there, on the assurance that his plant would be free of tax burden for a specified number of years. As an added inducement the cost of the land in such cases was apt to be very low.

“Swayed by these and other minor considerations, the manufacturer would buy a site and build in this vicinity to find, too late, that his factory, finished and in operation, was not properly placed with reference to raw materials, low power rates, good water supply, suitable labor conditions and within reasonable distance from a market.”

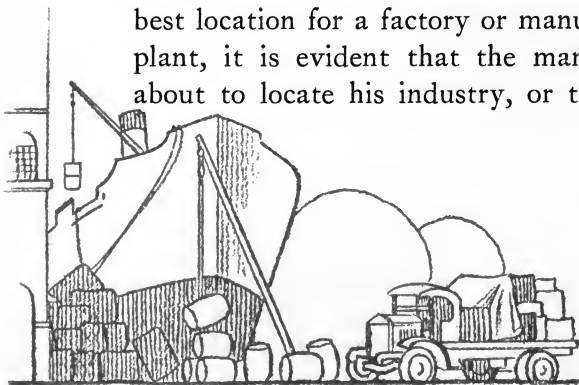
\* From *The Textile World*, July 23, 1921.



Facilities for the disposal of wastes is an important factor in many manufacturing processes. At some locations these must be taken care of by the individual manufacturer, in others sewage systems are available, in still others, refuse and waste may be fed into nearby streams. State laws frequently have bearing on this matter and should be consulted before decision is reached.

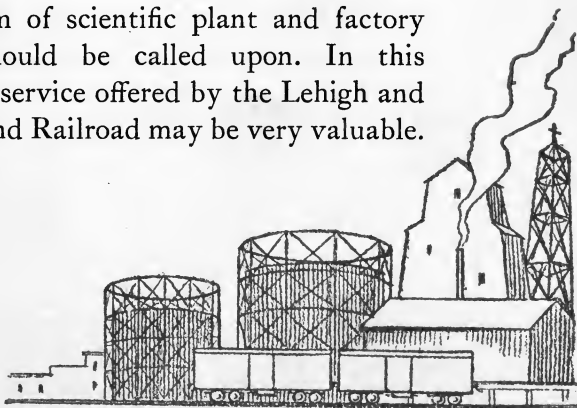
There are many other considerations that should be investigated and weighed in choosing the site itself; such as the nature of the land, its contour and soil, the shape of the plot and similar elements. But these are details that follow the more important factors dealing with location in general. The important thing is to select the right location or locality, the site itself should then be carefully chosen.

From this condensed survey of the principal factors that should ordinarily determine the best location for a factory or manufacturing plant, it is evident that the manufacturer about to locate his industry, or the manu-



facturer who is considering re-locating his disadvantageously situated plant, must carefully contrast, compare and consider many different factors if he is to find *the one location* that is the very *best one* for him. His investigation of all suggested sites must be drastically thorough and his final decision must rest on the rock-ribbed foundation of Fact, Truth and Correct Principles.

He should not rely wholly on the reports of people or organizations interested in boosting some particular locality, for their reports must almost necessarily be colored by their enthusiasm. The Census reports and some of the Departmental reports of the Federal Government will disclose much valuable information, and some of the bulletins issued by the several States may be of assistance. In addition, the counsel of someone thoroughly experienced in the problem of scientific plant and factory location should be called upon. In this respect the service offered by the Lehigh and New England Railroad may be very valuable.





## LOCATING THE FACTORY



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### A STRATEGETIC RAILROAD

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“The development of any manufacturing business today and the plans for growth in any industry hinge on this one idea—specialization.”

—E. H. AHARA, *General Superintendent*,  
DODGE MANUFACTURING COMPANY.

**I**N effect, the Lehigh and New England Railroad is a large belt-line or connecting railroad which crosses and connects with all the principal trunk-line railways in the eastern part of the United States. It provides the same advantages to industries located along its lines as the belt-lines around cities provide for the industries situated along their tracks. The chief difference is that the Lehigh and New England Railroad serves a larger territory.



It extends from Nesquehoning in Carbon County, Pennsylvania, to Campbell Hall in Orange County, New York, and embraces a district rich in manufacture, agriculture and natural resources. It forms a gateway to the rich New England factory district, and gives ready access to all the adjacent Atlantic seaports for ocean-bound or canal-bound traffic. It taps the anthracite coal fields, the Portland cement district of the Eastern Pennsylvania, and traverses a section of the country rich in slate, limestone and many other raw materials of great importance to many different industries.

It should be remembered that /“a big majority of our industries today are included in an area bounded by lines connecting Portland, Maine, Milwaukee, Wisconsin, St. Louis, Missouri and Baltimore, Maryland. This area comprises about one-twelfth of the total area of the United States and about one-half of its population.”/ And although location along the lines of the Lehigh and New

England Railroad is *not* the best for every form of industry, *it is an excellent location for many different enterprises.*

The Lehigh and New England Railroad knows that its prosperity depends upon the prosperity of the industries it serves. Consequently, its officers are interested in having only those industries locate along its lines who will be best located when located there. To this end this railroad places at the disposal of the manufacturer who wishes to thoroughly investigate *all* localities that may prove desirable, its full facilities for the analysis of factory and plant locations.

Data and records of great value, many of which the average manufacturer would not be in position to consult, are accessible to the Lehigh and New England Railroad. Its research work and reports are made in the interest of the manufacturer, impartially and comprehensively, in the same way the manufacturer himself, or his engineering specialist, would make them. This contact

with factors and figures in which the manufacturer considering factory or plant location or re-location is intimately concerned, is offered to those interested without cost or obligation.

A resume of the scope, importance and value of this service will be furnished on request.

*Traffic Department*  
LEHIGH AND NEW ENGLAND  
RAILROAD COMPANY

GENERAL OFFICES  
BETHLEHEM, PENNSYLVANIA

